

Title (en)

Mathematical image assembly in a scanning-type microscope

Title (de)

Mathematische Bildrekonstruktion in einem Abtastmikroskop

Title (fr)

Reconstruction d'image mathématique dans un microscope de type balayage

Publication

EP 2958130 A1 20151223 (EN)

Application

EP 14172871 A 20140618

Priority

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Abstract (en)

A method of accumulating an image of a specimen using a scanning-type microscope, comprising the following steps: - Providing a beam of radiation that is directed from a source through an illuminator so as to irradiate the specimen; - Providing a detector for detecting a flux of radiation emanating from the specimen in response to said irradiation; - Causing said beam to undergo scanning motion relative to a surface of the specimen, and recording an output of the detector as a function of scan position, which method additionally comprises the following steps: - In a first sampling session S_1 , gathering detector data from a first collection P_1 of sampling points distributed sparsely across the specimen; - Repeating this procedure so as to accumulate a set $\{P_n\}$ of such collections, gathered during an associated set $\{S_n\}$ of sampling sessions, each set with a cardinality $N > 1$; - Assembling an image of the specimen by using the set $\{P_n\}$ as input to an integrative mathematical reconstruction procedure, wherein, as part of said assembly process, a mathematical registration correction is made to compensate for drift mismatches between different members of the set $\{P_n\}$.

IPC 8 full level

H01J 37/22 (2006.01); **H01J 37/28** (2006.01); **G02B 21/00** (2006.01)

CPC (source: CN EP US)

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Citation (applicant)

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- EP 2557586 B1 20140402 - FEI CO [US]
- EP 2557587 A2 20130213 - FEI CO [US]
- EP 2648208 A2 20131009 - FEI CO [US]
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AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

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DOCDB simple family (application)

EP 14172871 A 20140618; CN 201510339651 A 20150618; EP 15172227 A 20150616; JP 2015117931 A 20150611; US 201514743780 A 20150618